

XXIX.—*Remarks on the Genera Tanystoma, Nematura, and Anaulus.* By W. H. BENSON, Esq.

MR. H. ADAMS having kindly brought to my notice the previous employment of the term *Tanystoma*\* for a genus of Coleoptera, and of *Nematura* for a genus of Birds, it appears advisable that fresh names should be given to those testaceous groups.

The term *Tanystoma* was assigned, in the February Number of the 'Annals' for the present year, to a curious Anostomatous form from Burmah. The designation *Hypselostoma*, having reference to the uplifted position of the mouth of the shell, is now substituted for the former appellation.

*Nematura* was described in 1836, in the 5th volume of the 'Journal of the Asiatic Society of Calcutta,' from the shell and animal of a single species, *N. Delta*, which I had found at low tide in the mud of the river Hooghly opposite to Calcutta. The genus has since that time been increased by several species, from other parts of the Eastern World, and some yet remain to be described. The name has been adopted, in systematic and other works, as referring to a genus of Testacea; but Fischer having first employed the term, in 1813, in another department of zoology, I propose to designate the shell as *Stenothyra*, a title expressive of the contracted structure of the aperture.

Pfeiffer's description of *Anaulus* in the 'Proc. Zool. Soc.' for 1855, p. 105, does not indicate the course of the canal or tube, which terminates in the outer portion of the double peristome in *A. bombycinus*, as well as in his new species *A. Lorraini*, from Pulo Penang, described in a paper read to the Zoological Society at a recent Meeting. In the latter species, the opening, at first sight, might be supposed to be altogether outside of the peristome, but on a closer inspection is found to be embraced by a portion of it. In both species the canal or tube is sutural and internal, and can be traced externally along the last whorl, at the extremity of which it ascends more rapidly in *A. Lorraini* than in the original species.

In a specimen of *A. Lorraini* I was unsuccessful in an attempt to penetrate the canal with a bristle; but in one of *A. bombycinus* I have succeeded in passing a hair, through the canal, into the concavity of the spire. Mr. H. Adams informs me that *Megalomastoma Chrysalis*, Pfr., is also an *Anaulus*, with a similar sutural tube, a fact which was ascertained from an accidental perforation at some distance from the aperture. He further stated that the anterior opening was partly concealed by the reflected portion of the peristome.

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The use of the tube seems to be the preservation of a communication with the external air when the aperture is closed by the operculum. The following addition to Pfeiffer's description of *Anaulus* will be necessary:—

“Canali suturali interno profunde in caverna spiræ desinente, utrinque pervio.”

Cheltenham, 13th March 1856.

XXX.—*New Researches in Vegetable Embryogeny.*

By M. TULASNE\*.

DR. HERMANN SCHACHT, a German phytotomist well known by numerous and important works, some months ago† allowed himself to be persuaded, that the doctrine of the generation of plants which he has embraced, namely that of M. Schleiden and the pollinists, was then peremptorily established and proved. His belief was founded upon some observations recently made by a young botanist of Berlin, M. T. Deecke, who, as was asserted, by an extremely fortunate dissection of the ovule of the *Pedicularis sylvatica*, had put it beyond a doubt, that the vegetable embryo is actually produced in the extremity of the pollen-tube itself, after the introduction of the latter into the embryonal sac. Two of the botanists most competent to judge of this difficult question, MM. Hugo von Mohl and W. Hofmeister ‡, have strongly protested against allowing the memoir and anatomical preparations of M. Deecke the demonstrative value which was attributed to them; and although their criticisms have called forth long replies from MM. Schacht and Deecke, supported upon new observations §, there would certainly be cause for astonishment if their confidence in the correctness of their opinions had not been somewhat shaken, and their conviction had really remained entire.

The passage of every creature from non-existence to existence, its entrance into life, is a phænomenon too mysterious for us to flatter ourselves that we shall ever be able to understand exactly all its circumstances. Nevertheless, as the questions at issue between M. Schleiden and his opponents are questions of fact, antecedent to any doctrinal interpretation, and capable of being judged by our eyes, we need not despair of some day seeing less diversity of opinion amongst the botanists who occupy themselves

\* From the *Comptes Rendus*, Nov. 12, 1855, p. 790.

† See the ‘*Flora*,’ 1855, part 10.

‡ See *Annales des Sciences Nat.* 4 sér. iii. pp. 209 & 219.

§ ‘*Flora*,’ 1855, no. 29, and *Botanische Zeitung* of Berlin, Sept. 14 & 19.